



*East Multnomah County*

# Transportation Safety Action Plan

November 18, 2024

alta

# Project Timeline

## EAST MULTNOMAH COUNTY TRANSPORTATION SAFETY ACTION PLAN TIMELINE



### Phase 1: Listen & Learn

Jun - Nov 2024

**Community Storytelling +  
Policy and Safety Analysis**



### Phase 2: Reflect & Dive In

Mar - Apr 2025

**Develop and  
Share Transportation  
Safety Improvement  
Recommendations**



### Phase 3: Refine

Jul - Aug 2025

**Prepare Draft Plan**



### Final Plan Complete

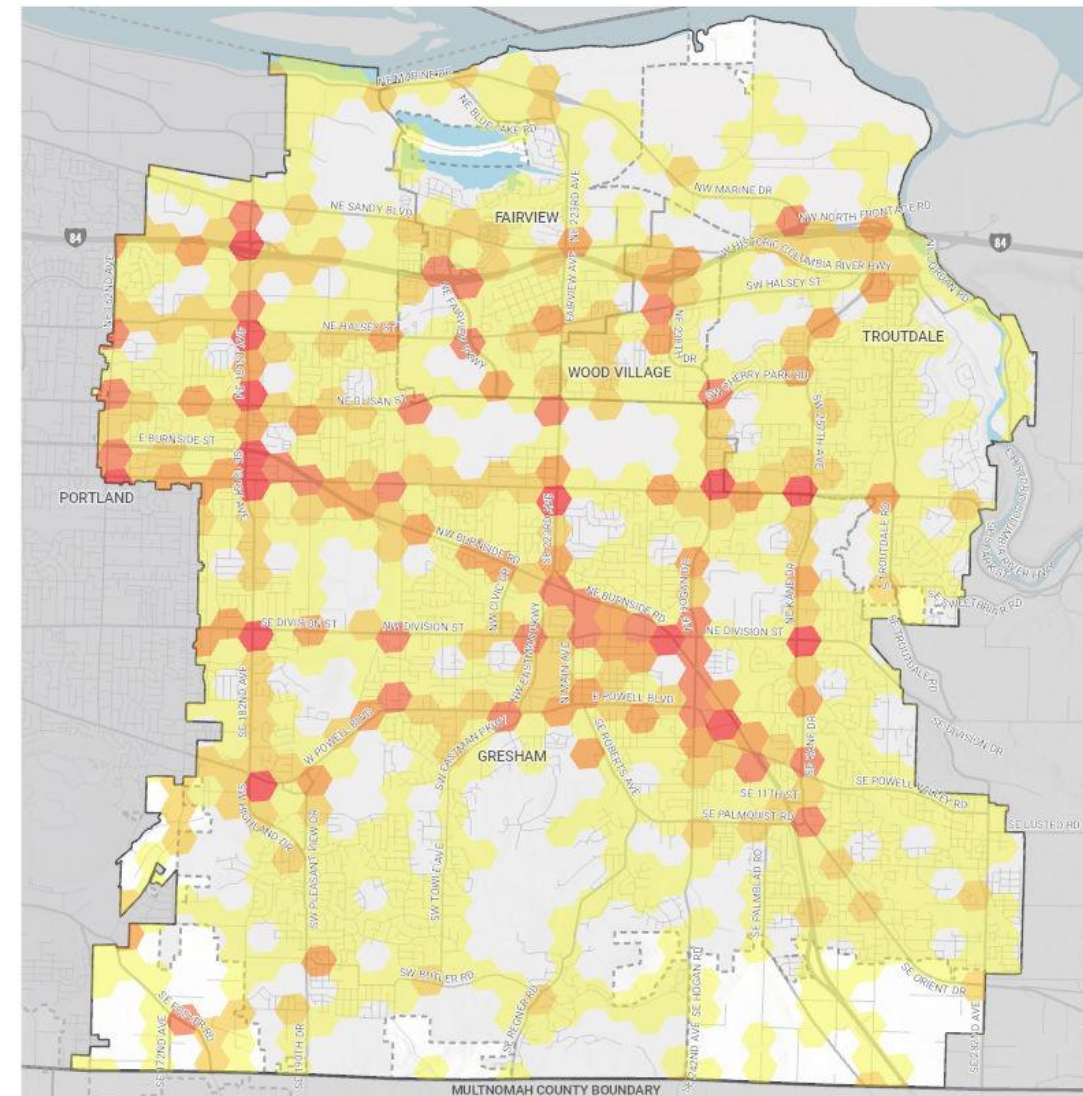
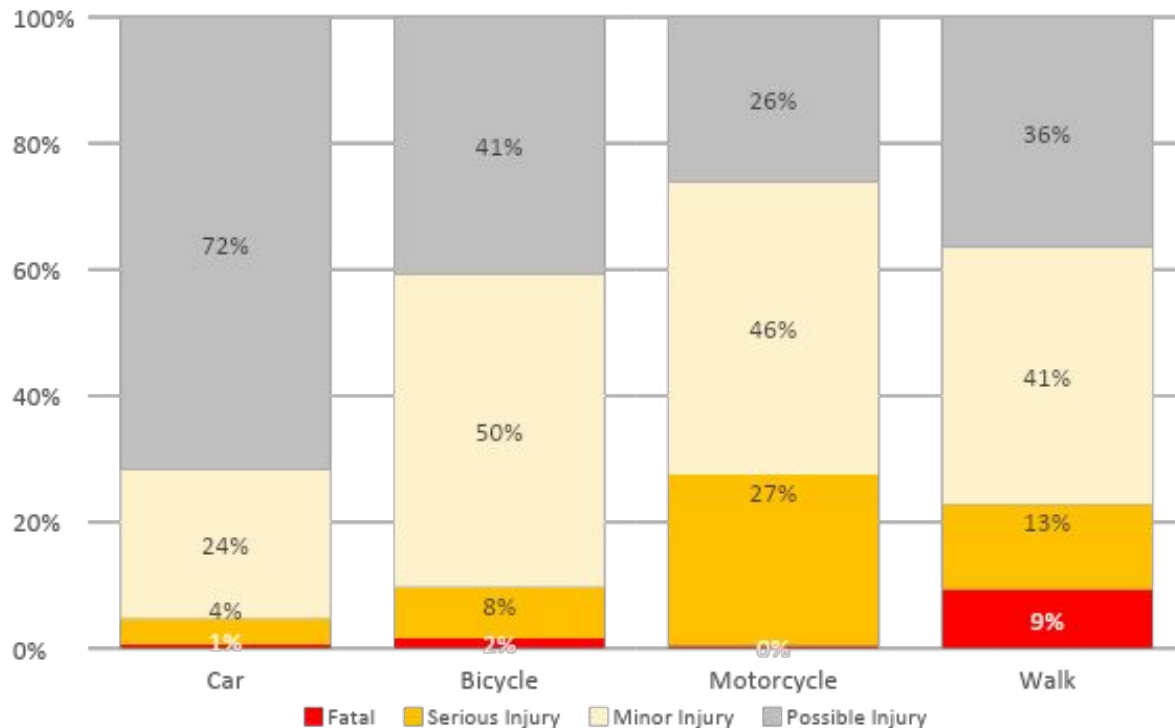
Oct 2025



# Key Crash Trends Summary

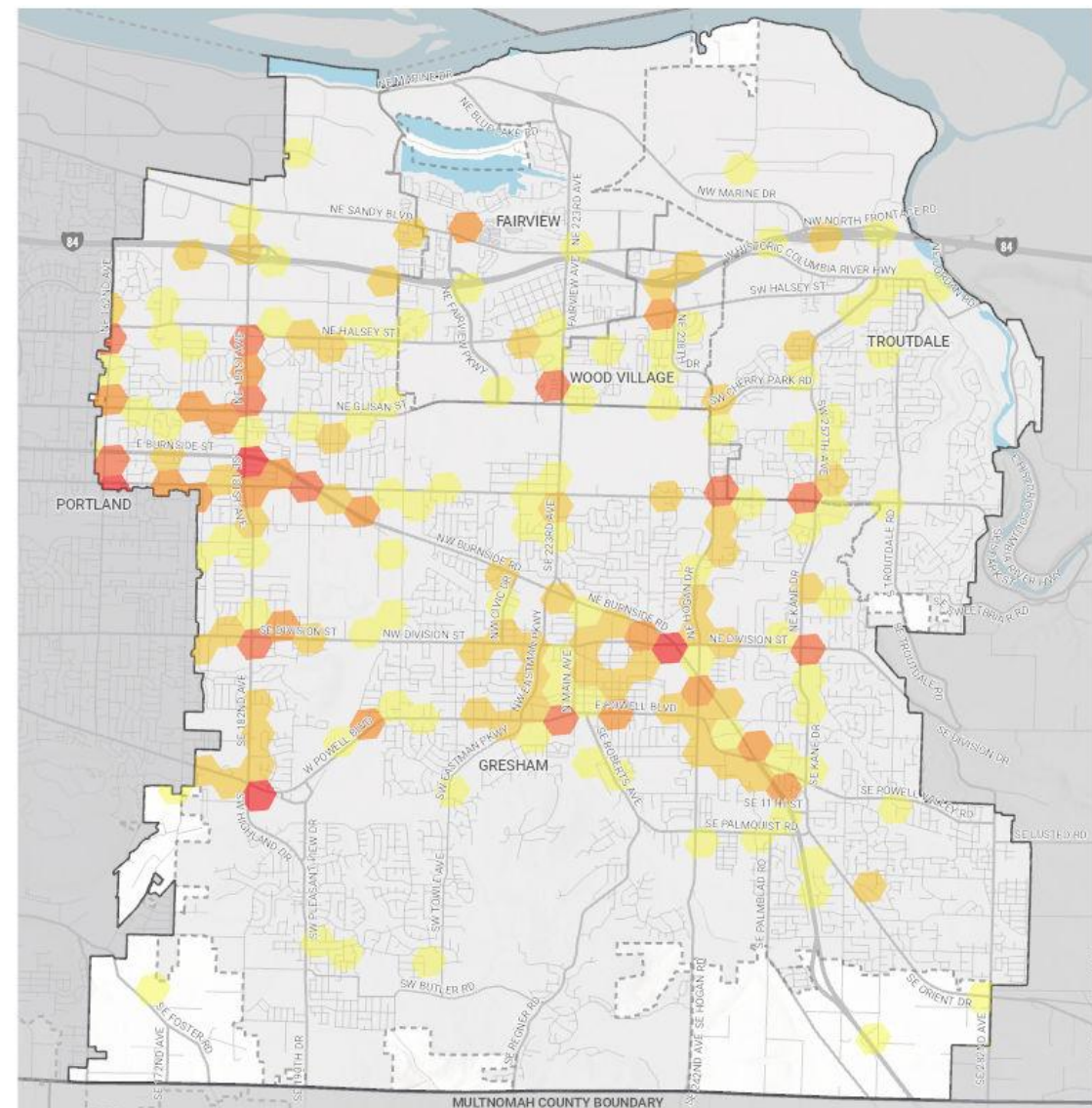
- 8,474 injury crashes occurred in the study area (2013 to 2022)
- Most severe crashes in East Multnomah County are on the arterial network
- People walking, biking and using a motorcycle were more likely to be involved in a serious injury or fatal crash

Crash Severity by Mode



# Pedestrian Crash Trends

- The most common cause is failure to yield the ROW
- Second-most common cause is a pedestrian being illegally in the roadway
- The highest concentrations of all pedestrian crashes are surrounding the intersections at NE Division & NE Kane Drive, NE Burnside Rd & NE Division, SE 182nd Avenue & W Powell Boulevard, and E Burnside Street and SE 181st Avenue.
- High pedestrian crash corridors include SE Stark Street, Burnside Road, 181st, 182nd, and NE 162nd Avenues



PEDESTRIAN CRASH DENSITY MAP (2013-2022)  
EAST MULTNOMAH COUNTY TSAP

CRASH CONCENTRATION INDEX\*

- High
- Medium
- Low

DESTINATIONS + BOUNDARIES

- City Limits
- Project Area Boundary

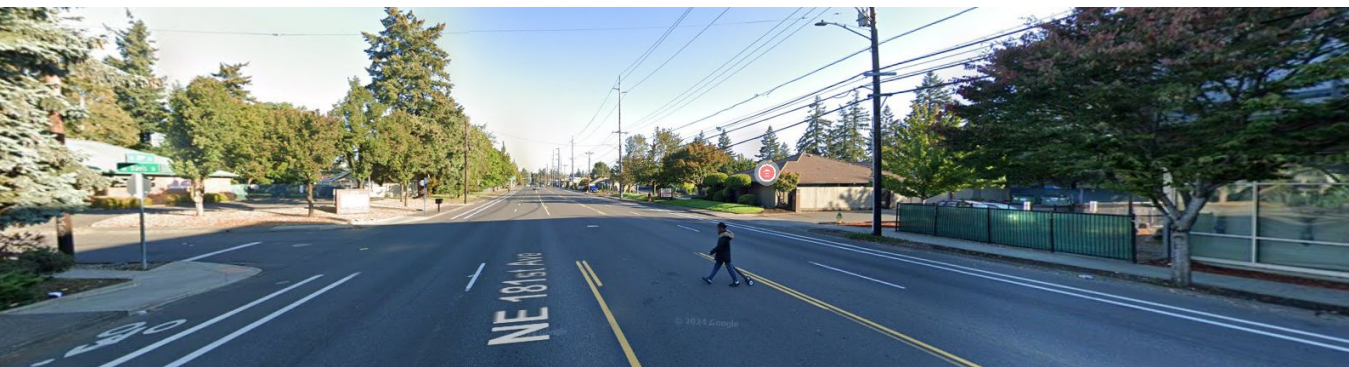
\* The Crash Concentration Index was developed by summing up crash scores weighted by severity inside a respective hexagon.

data provided by Metro, RA, and GDOT



# Crash Profile: Pedestrian Crash, After Dark, On Road with Full or Partial Sidewalk

- 46% of pedestrian fatal and serious injury crashes
- 38% of all pedestrian injury crashes
- Of all modes, crashes involving pedestrians were most likely to occur after dark (with or without streetlights). Pedestrians are vulnerable to poor visibility.
- Clusters near intersection of Burnside St/Division St
- Clusters along NE 181<sup>st</sup> Ave between NE Halsey St and SE Stark St



## CRASH PROFILE 3

EAST MULTNOMAH COUNTY  
TSAP

Profile 3: Pedestrian, After Dark,  
Road with Sidewalks

### FEATURES

- Profile 3 Crash
- City Limits
- Project Area Boundary
- Multnomah County



# Crash Profile: Pedestrian Crash, At intersection, with Improper Maneuver by Driver

- 25% of pedestrian fatal and severe injury crashes
- 38% of pedestrian injury crashes
- Equal split between signalized and unsignalized intersections
- Most common cause was failure to yield ROW



## CRASH PROFILE 4

EAST MULTNOMAH COUNTY  
TSAP

Profile 4: Pedestrian, Improper  
Maneuver by Driver, At Intersection

### FEATURES

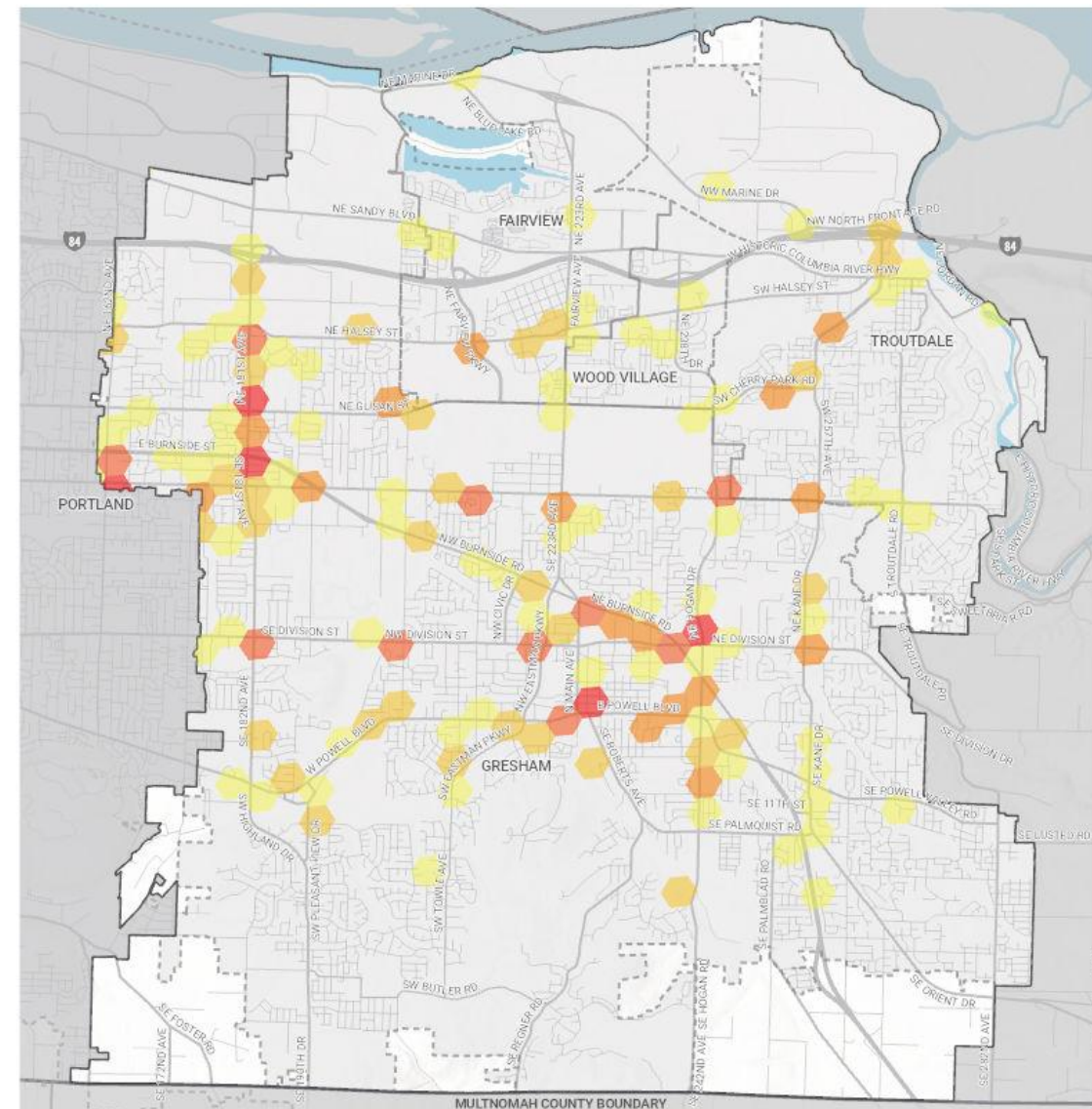
- Profile 4 Crash
- City Limits
- Project Area Boundary
- Multnomah County





# Bike Crash Trends

- Bike crashes are concentrated in a few corridors:
  - 181st Avenue
  - Burnside Road
  - Powell Boulevard
  - NE Glisan Street
  - Segments of Powell Blvd, Kane Drive, and NE Halsey Street
  - Intersection of Burnside Road/Division Street



**BICYCLE CRASH DENSITY MAP (2013-2022)**

EAST MULTNOMAH COUNTY TSAP

CRASH CONCENTRATION INDEX\*



DESTINATIONS + BOUNDARIES



\*The Crash Concentration Index was developed by summing up crash scores weighted by severity inside a respective hexagon.



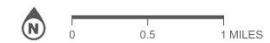
# Crash Profile: Bicycle Crash, At Intersection, with a Turning Vehicle, On Road with Dedicated Bike Facility

- Bike facilities are defined as bike lanes (protected and unprotected) and shared-use paths
- People riding bikes are still vulnerable to vehicles turning at intersections, even on dedicated facilities
- 33% of bicycle-involved fatal and serious injury crashes
- 29% of bicycle injury crashes
- In 70% of these crashes the cause was failure to yield ROW
- Crashes are concentrated on NE 181<sup>st</sup> Ave between NE Halsey St and SE Stark St (unprotected bike lane)



**CRASH PROFILE 5**  
EAST MULTNOMAH COUNTY  
TSAP

- FEATURES**
- Profile 5 Crash
  - ▭ City Limits
  - ▭ Project Area Boundary
  - ▭ Multnomah County



Profile 5: Bicyclist, With Turning Vehicle, At Intersection, Near Dedicated Bike Lane or Trail

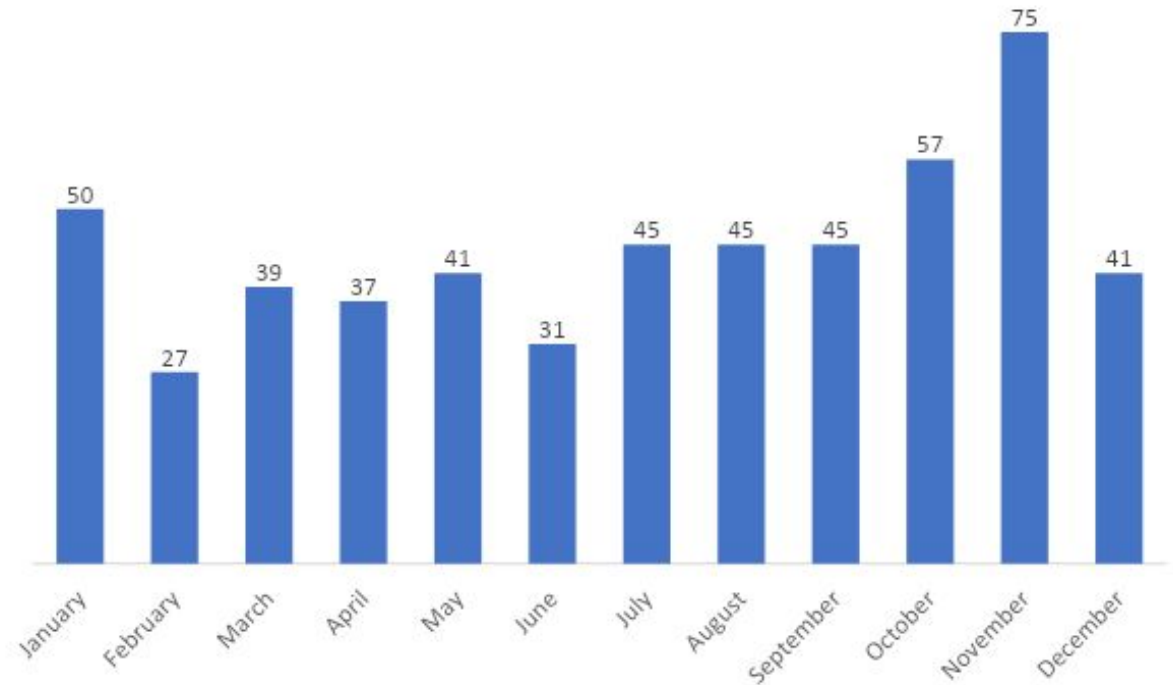




# Crash Trends by Month

- Serious injury and fatal crashes spike in the winter months for all modes
- Trend cannot be explained just by darkness in winter, since darkness peaks in December
- The large spike in November possibly attributed to Daylight Savings Time change.

Serious Injury and Fatal Crashes by Month, All Modes





# Crash Trends by Month

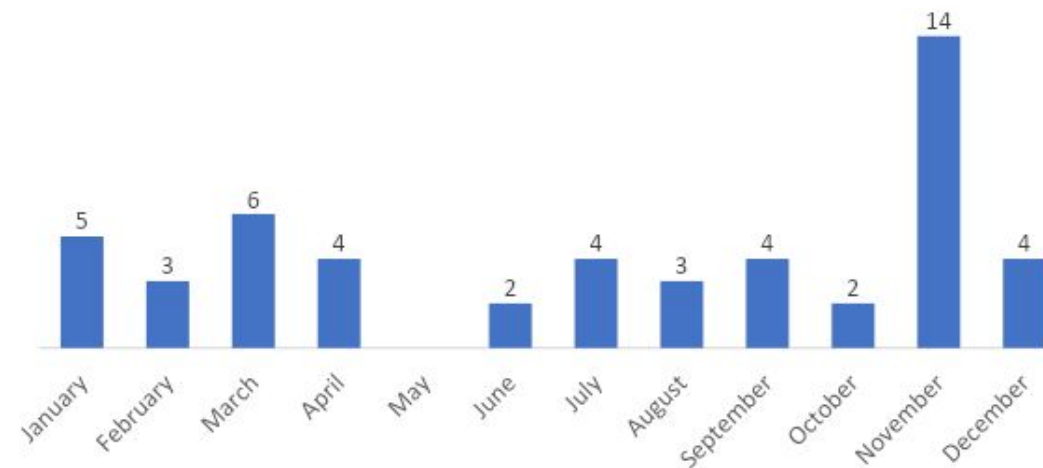
## Dusk and Dawn

- Looking at crashes that occurred at dusk/dawn only, November and March both stand out
- The trend coincides with the months of Daylight Savings Time beginning and ending, when the dusk and dawn hours suddenly shift into peak commuting times:
  - November: sunset shifts earlier from about 6pm to 5pm
  - March: sunrise shifts later from about 6:30 am to 7:30 am
- Trend is especially prevalent for bicycle and pedestrian injury crashes at dusk or dawn in November

Injury Crashes at Dusk or Dawn by Month, All Modes

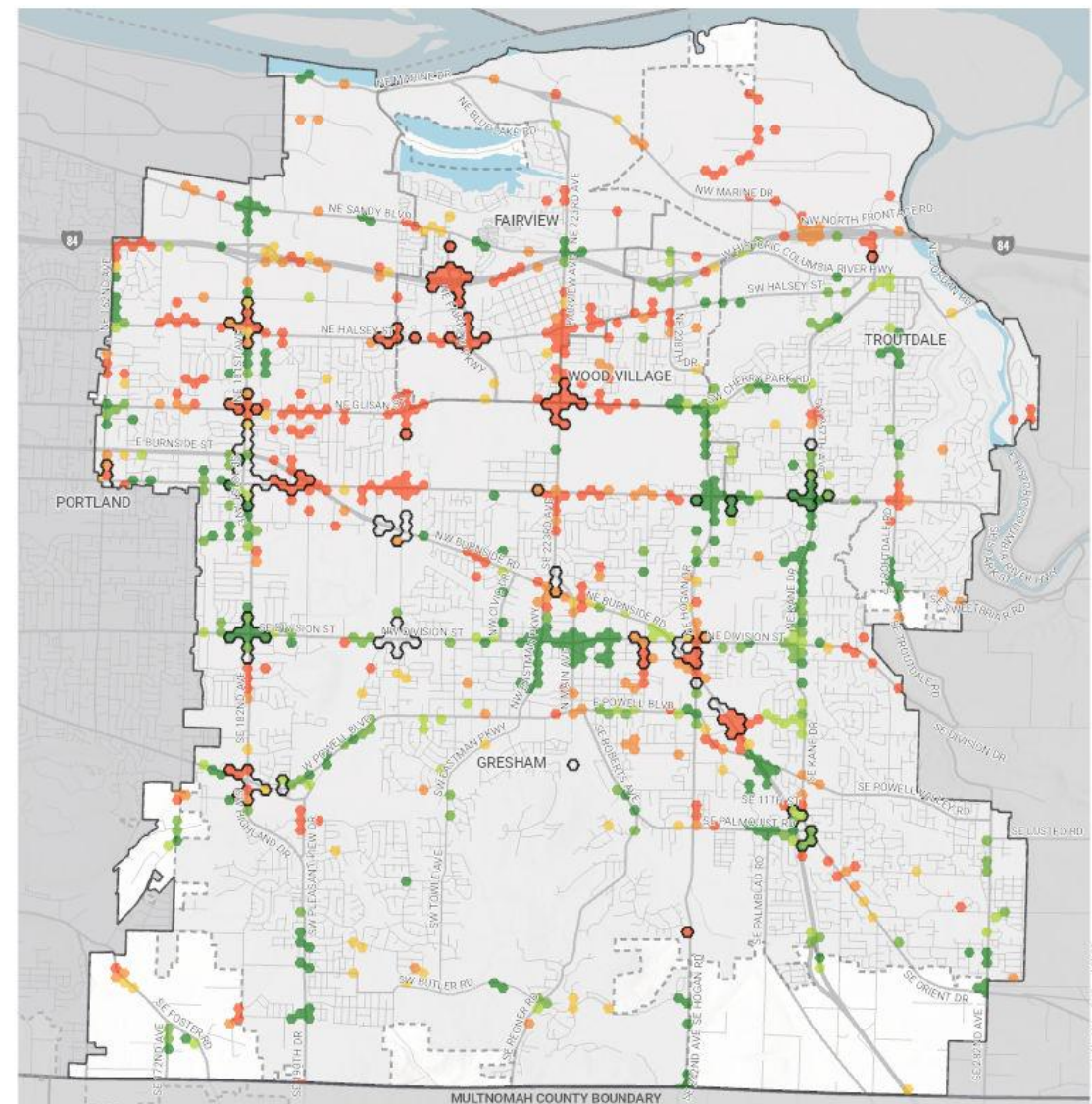


Bicycle and Pedestrian Injury Crashes at Dawn or Dusk



# Temporal Crash Trends (2013-2022)

- Red shows upward trend of number of crashes at that location over time
- Green shows downward trend of crashes at that location over time
- Black outline shows identified hot spots that consistently have a high number of crashes over time: communities of Wood Village and Fairview, along Burnside Road and Division Street and the 181st Ave/182nd Ave/Highland Drive corridor
- Crashes have increased over time in the communities of Wood Village and Fairview.
- Crashes have increased over time at the intersections of NE Burnside Road & NE Division Street and SE 181st Ave & SE Stark Street.
- Crashes have decreased over time in the community of Troutdale and along Division Street.



**TEMPORAL CRASH HOTSPOT & TREND BIN ANALYSIS (2013-2022)**  
EAST MULTNOMAH COUNTY TSAP

**RESULTS\***

- Identified Hotspots
- Trend Bin Results
  - Downward Trend (99% Confidence)
  - Downward Trend (95% Confidence)
  - Downward Trend (90% Confidence)
  - Upward Trend (90% Confidence)
  - Upward Trend (95% Confidence)
  - Upward Trend (99% Confidence)

**DESTINATIONS + BOUNDARIES**

- City Limits
- Project Area Boundary

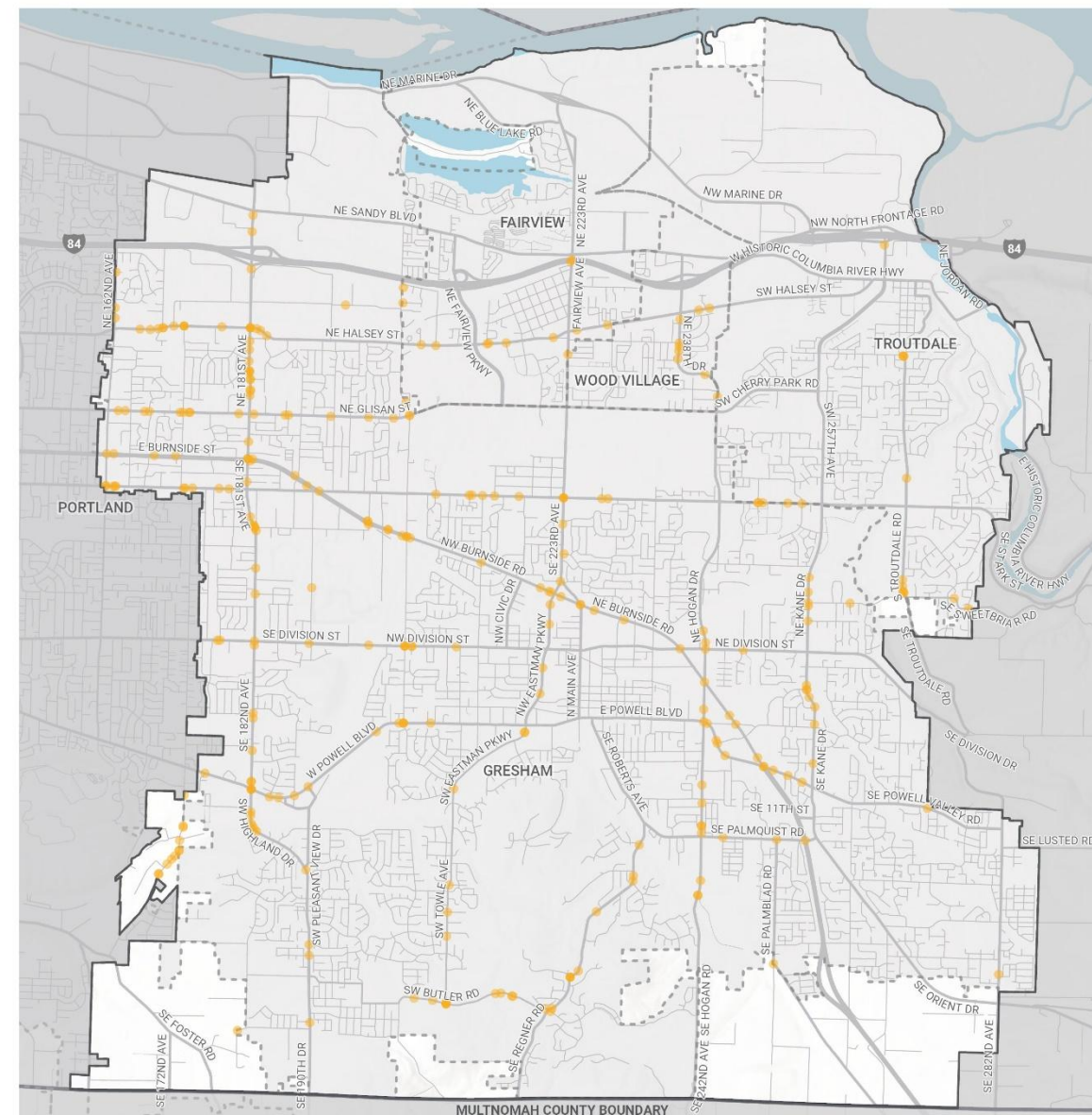


\* Hotspots and trend bins were assembled using a space time cube with a time interval of 2 months comparing crashes on a yearly basis. Hotspots only



# Crash Profile: Fixed Object Crashes on 35 MPH Roads

- 9% of all fatal and severe injury crashes
- 3% of all injury crashes
- 35 MPH roads account for 13% of centerline miles overall, but 66% of fatal and severe injury crashes
- NE 181<sup>st</sup> Ave stands out on the profile map



## CRASH PROFILE 2

EAST MULTNOMAH COUNTY  
TSAP

Profile 2: Fixed Object, 35 MPH  
road

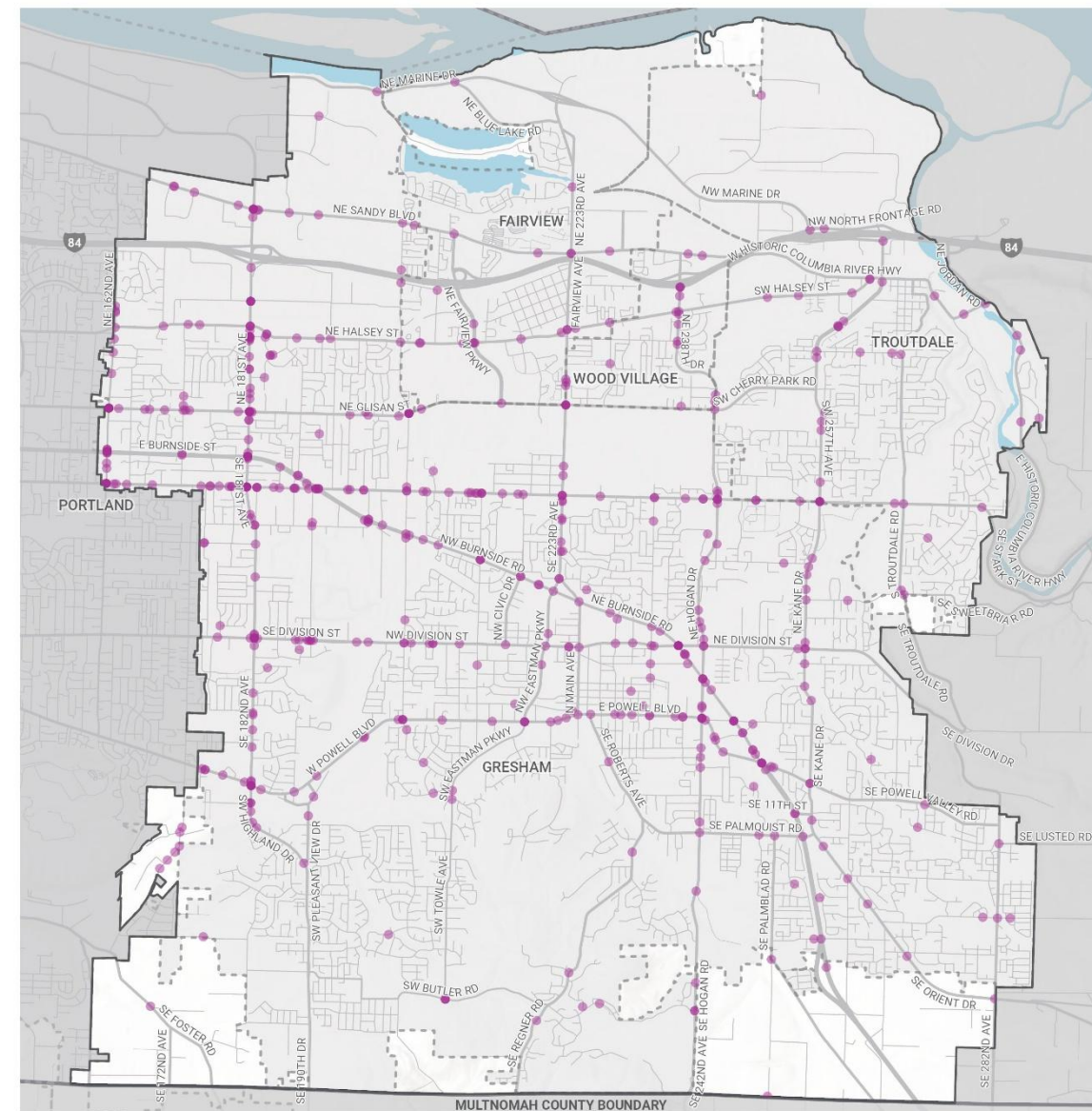
### FEATURES

- Profile 2 Crash
- City Limits
- Project Area Boundary
- Multnomah County



# Crash Profile: Crashes with Drugs or Alcohol Involved

- Alcohol and drug involved crashes were four times as likely as injury crashes overall to result in a fatal and severe injury crash
- When the crash results in a fatality, about half the time the crash is with a pedestrian
- When the crash results in a serious injury, it is usually because an impaired driver collides with a fixed object
- The majority of all fatalities happen after dark, and of those after-dark fatalities, drug or alcohol impairment is involved in 83% of crashes.



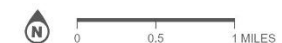
## CRASH PROFILE 1

EAST MULTNOMAH COUNTY  
TSAP

Profile 1: Alcohol or Drugs Involved

### FEATURES

- Profile 1 Crash
- City Limits
- Project Area Boundary
- Multnomah County

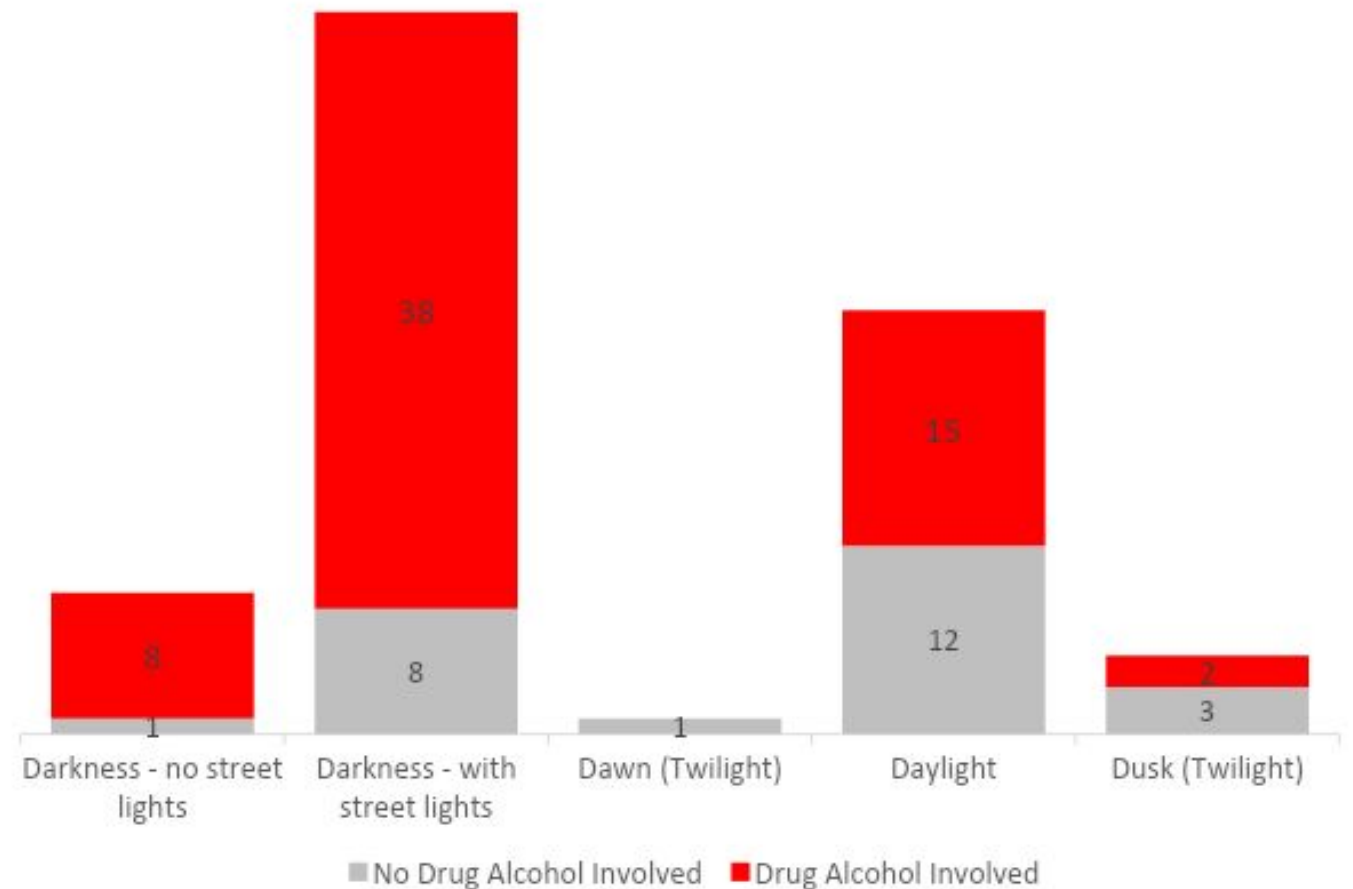




# Drug and Alcohol Involved at Dark

Fatalities by Time of Day

- While most injury crashes overall happen during daylight hours, the majority of fatalities happen after dark.
- Of these after-dark fatalities, drug or alcohol impairment is involved in 83% of crashes.
- Drug and alcohol impairment significantly increases crash severity in the study area, especially after dark



# Next Steps

- Finalize Phase I Engagement Summary and Safety Analysis (Fall)
- Define Additional Analysis Topics (Winter)
- Goal setting (Spring)
- Begin Strategy and Project Selections (Winter/Spring)



# Crash Profiles

Profile Number	Mode	Crash Factor	Contextual Factor	Share of injury crashes for this mode	Share of fatal and severe injury crashes for this mode
1	All	Alcohol or drugs involved		7%	24.0%
2	All	Fixed object	35 mph road	3%	8.6%
3	Pedestrian	Dark	Road with full or partial sidewalk	38%	46.3%
4	Pedestrian	Improper maneuver by driver	At intersection	38%	25.3%
5	Bicyclist	Vehicle turning movement	At intersection, on road with dedicated bike lane or trail	29%	33.3%
6	Motorcyclist	Vehicle turning movement	At intersection	30%	31.7%

*Note: Profiles are not mutually exclusive. Some crashes may belong to more than one profile while others do not belong to any.*

*Thank you!*